

This Office action is in response to applicant's amendments and remarks of 11/21/2007 and in further response to telephone interviews conducted between the Examiner and Mr. Tsao on 2/4/2008 and 2/7/2008.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in telephone interviews with Mr. Tsao on 2/4/2008 and 2/7/2008.

#### **Amendments to the Claims**

Claim 15. (Currently amended) An anti-bacteria, anti-virus, and anti-fungus composition, which includes the following ingredients:

(A) a metal ionic compound having catalytic function, which has a formula  $Fe_bX_a$ , in which X is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, perchlorate, gluconate, ascorbate, ethylenediamine tetraacetate, fumarate, and lactate; a is 2 or 3; and b is an integer of from 1 to 6;

(B) an ionic compound having a formula  $N_cX$ , in which N is an element selected from the group consisting of Li, Na, and K; X is an anionic group selected from the

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group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, succinate, phosphate, pyrophosphate, perchlorate, gluconate, ethylenediamine tetraacetate, fumarate, and lactate; and c is an integer of from 1 to 4; and

(C) an additive having a formula  $R_dY_z$ , in which R is an element selected from the group consisting of Li, Na, K, Mg, Ca, and Zn, Y is selected from the group consisting of chloride, nitrate, sulfate, carbonate, bicarbonate, phosphate, dihydrogen phosphate, hydrogen phosphate, and oxalate; d is 1, 2 or 3; and z is 1 or 2;

wherein the weight ratio of ingredients (A):(B):(C) is 1:10-50:1500-3000.

Claim 17. (Currently amended) A spray, aerosol, and a film comprising the anti-bacteria, anti-virus, and anti-fungus composition according to claim 15.

Claim 18. (Currently amended) A method comprising:

Applying to a filter of an air-conditioner, a tap, a stool, an elevator interior, or a keyboard in a household, a vehicle, a hospital, a school, a restaurant, a hotel, or an internet coffee shop, or applying to a human being the anti-bacteria, anti-virus, and anti-fungus composition according to claim 15.

Claim 23. (Currently amended) The anti-bacteria, anti-virus, and anti-fungus composition of claim 15, wherein the X in the formula for ingredient (A) is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate,

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perchlorate, ascorbate, ethylenediamine tetraacetate, fumarate, and lactate; a is 2 or 3; and b is an integer of from 1 to 6.

Claim 24. (Currently amended) The anti-bacteria, anti-virus, and anti-fungus composition of claim 15, wherein the X in the formula for ingredient (A) is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, perchlorate, gluconate, ascorbate, ethylenediamine tetraacetate, fumarate, and lactate; a is 2 or 3; and b is an integer of from 1 to 6.

Claim 25. (Currently amended) The anti-bacteria, anti-virus, and anti-fungus composition of claim 15, wherein the X in the formula for ingredient (A) is an anionic group selected from the group consisting of nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, perchlorate, ascorbate, ethylenediamine tetraacetate, fumarate, and lactate; a is 2 or 3; and b is an integer of from 1 to 6.

#### **Amendment to the Specification**

Specification page 6, line 6: at the end of line 6, insert the following as a separate new paragraph - - -

The present invention is further illustrated by the following specific embodiment:

An anti-bacteria, anti-virus, and anti-fungus composition, which includes the following ingredients:

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(A) a metal ionic compound having catalytic function, which has a formula  $Fe_bX_a$ , in which X is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, perchlorate, gluconate, ascorbate, ethylenediamine tetraacetate, fumarate, and lactate; a is 2 or 3; and b is an integer of from 1 to 6;

(B) an ionic compound having a formula  $N_cX$ , in which N is an element selected from the group consisting of Li, Na, and K; X is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, succinate, phosphate, pyrophosphate, perchlorate, gluconate, ethylenediamine tetraacetate, fumarate, and lactate; and c is an integer of from 1 to 4; and

(C) an additive having a formula  $R_dY_z$ , in which R is an element selected from the group consisting of Li, Na, K, Mg, Ca, and Zn, Y is selected from the group consisting of chloride, nitrate, sulfate, carbonate, bicarbonate, phosphate, dihydrogen phosphate, hydrogen phosphate, and oxalate; d is 1, 2 or 3; and z is 1 or 2;

wherein the weight ratio of ingredients (A):(B):(C) is 1:10-50:1500-3000.

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The following is an examiner's statement of reasons for allowance: The claimed invention is now limited to an antibacterial, antiviral and antifungal composition/method,

wherein a ferric or ferrous compound is in combination with ingredients (B) and (C) at the specified weight proportions (see claim 15 for complete details). The prior art does not disclose, suggest or render obvious such combination and proportion of ingredients. Even though ingredients (B) and (C) have overlap – for example sodium chloride is possible for both (B) and (C) – the distinct weight ratio required at the end of claim 15 would have conveyed to the ordinary skilled artisan that (B) and (C) are not the same. Applicant agreed with this interpretation, as noted in the attached Interview Summary.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Pak/  
Primary Examiner, Art Unit 1616